INDEX.

PAGE

Abbe, Cleveland, Sketch of..... 400
Abercromby, The Hon. Ralph..... 648
"Act of God," The, and "Human Responsibility" (Editorial)..... 555
Advance, A Further (Editorial)..... 128
Advances, Recent, in Sanitary Science..... 136
Agassiz and Evolution (Le Conte)..... 17
Agassiz's Service to Evolution..... 717
Alaska and its Tundra..... 711
Albumen, Vegetable and Animal (Bernhardt)..... 541
Allen, Grant..... 189
Amazons, The Table-Topped Hills of the..... 137
American Cinquefoils (Allen)..... 189
American Zoölogists, What, have done for Evolution (Morse)..... 100, 492
Argyll, The Duke of..... 241
Astrologers, Persian..... 141
Astronomical Agency, A Central..... 282
Astronomy, Photography as an Aid to..... 426
Astronomy with an Opera-Glass (Serviss)..... 58, 111
Athletics, College, and Physical Development (Richards)..... 721
Atmospheric Dust, Accumulations of..... 712
Atwater, Professor W. O..... 76
Audubon, The Proposed Monument to..... 281

Baeyer, John Jacob, Sketch of (Gore)..... 261
Bartol, H. W..... 236
Basements, The Unhealthfulness of (Stillman)..... 114
Bayou, What is a? (Williams)..... 123
Bears, Black..... 859
Beauty, The, of Old Wrought-Iron Work..... 857
Beebe, Edward H..... 122
Bees, Some Notes about..... 187
Bernhardt, W..... 541
Berthelot, M. P. E..... 220
Binet, A., and Féré, C..... 763
Bissell, Mary T., M. D..... 504
Blake, Henry A..... 682
Boas, Dr. Franz..... 628

Books noticed:

PAGE
Abercromby, Hon. Ralph. Weather 704
Adams, H. B. College of William and Mary 131
" Literature of Charities 416
Allinson and Penrose. The City Government of Philadelphia 279
Andrews, Benjamin. Institutes of General History 275
Ashley and Hutton. English History from Contemporary Writers 273
Ashley, W. J. Edward III and his Wars 273
Bain, Alexander. On Teaching English 850
Baird, Spencer F. Report of Smithsonian Institution, 1885–'86 417
Baldwin, Joseph. Elementary Psychology and Education 560
Bancroft, H. H. History of the Pacific States—Popular Tribunals 272, 562
Barrows, C. H. Facts and Fictions of Mental Healing 130
Barus and Strouhal. Physical Properties of the Iron Carburets 420
Barus, Carl. Subsidence of Fine Solid Particles in Liquids 420
Beal, W. J. Grasses of North America 131
Bert, Paul. Introductory Steps in Science 706
Binet, A., and Féré, C. Animal Magnetism 848
Biological Society of Washington, Proceedings, 1884 to 1886 564
Bishop, G. R. Exact Phonography 852
Board of Education, New York City—Forty-third Annual Report 279
Brewers' Association, United States, Proceedings of Convention, 1887. 277
Brinton, D. G. Ancient Nahuatl Poetry 561
" Conception of Love in American Languages 565
Brown, John A. Palæolithic Man in Northwest Middlesex 130
Bryce, James. Predictions of Hamilton and De Tocqueville 416
Bugbee, J. G. The City Government of Boston 279
Bureau of Education, Circular No. 1 131
Butler, J. S. Curability of Insanity, etc 132
Butler, N. M. The War of 1812 and the Consolidation of the Union .. 416
Byerly, W. E. Chauvenet's Treatise on Elementary Geometry 135
Carroll, Lewis. The Game of Logic 278
Chief Signal-Officer, Report for 1886 849
Cooper, Sarah. Animal Life in the Sea and on the Land 707
Da Paz, Campos. A Questão dos Vinhos 421
Dexter. Astronomical Revelations 567
Diller, J. S. Geology of Northern California 419
" Peridotite of Elliott County, Kentucky 420
Dimitry, John. Three Good Giants 415
Dolbear, Professor A. E. The Art of Projecting 850
Downing, A. J. Cottage Residences 567
Ebers, Georg. Richard Lepsius 850
Engelmann, G. J. Use of Electricity in Gynecological Practice 133
Everett, J. D. Outlines of Natural Philosophy 707
Fairchild. History of the New York Academy of Sciences 275
Finck, H. T. Romantic Love and Personal Beauty 128
Fish Commission of the United States, Report for 1885 564
Forest Commission, State of New York, Second Annual Report 567
Froebel, F., and Hailman, W. N. The Education of Man 707
Garlanda, Federico. The Fortunes of Words 134
Gilman's Historical Readers 130

Books noticed: PAGE

Gilson. Trees of Reading, Massachusetts 851
Grove, Sir George. A Dictionary of Music and Musicians 417
Haddon, A. C. Introduction to the Study of Embryology 134
Hall, G. Stanley. American Journal of Psychology 558
Halsted, B. D. Botanical Bulletin, Iowa Agricultural College 566
Harris, W. C. Fishes of North America 568
Heilprin, Angelo. Explorations on the West Coast of Florida 418
Herrmann, Gustav. The Graphical Status of Mechanism 132
"How I was Educated" Papers 851
Hutton. The Misrule of Henry III 273
Imperial University, Japan, Journal of the College of Science of 421
Jackson, E. P. The Earth in Space 855
Jones, L. E. The Best Reading 566
Jones, W. H. Federal Taxes and State Expenses 278
Johonnot, James. Stories of Our Country 567
Jordan, D. S. Science Sketches 563
King, C. W. The Gnostics and their Remains 559
Kirkup, Thomas. An Inquiry into Socialism 849
Knox, T. W. Decisive Battles since Waterloo 563
Langley, S. P. The New Astronomy 854
Laughlin, J. L. Elements of Political Economy 271
Lincoln, Mrs. D. A. Boston School-Kitchen Text-Book 560
Linderfeldt, K. A. Text-Book of Volapük 280
Lloyd, J. H. Moral Insanity in Medico-Legal Aspects 134
Love, S. G. Industrial Education 275
McCalley, Henry. On the Warrior Coal-Field 416
McGee, W. J. Meridional Deflection of Ice Streams 422
" Relations of Geology and Agriculture 566
Marks, W. D. The Relative Proportions of the Steam-Engine 415
Miles, Manly. The Microbes of Nitrification 421
Miller, A. J. Dress 850
Miller, L. W. The Essentials of Perspective 274
Mills, W. T. The Science of Politics 559
Mitchell, F. A. Ormsby Macknight Mitchell 853
Morrison, G. B. Ventilation and Warming of School-Buildings 849
Müller, F. Max. Biographies of Words 851
Nelson, Dr. Wolfred. Difficultés dans la Construction du Canal de Panama 420
New York State Board of Health, Examination of Beers 277
Norman, Henry. Bodyke 276
Oldberg, Oscar. Manual of Weights and Measures 132
Oleomargarine Question, The, An Abstract of 418
Oliver, J. A. W. Astronomy for Amateurs 853
Patton, J. H. Natural Resources of the United States 853
Peabody Museum, Twentieth Annual Report of the Trustees 417
Peale, A. C. Mineral Springs of the United States 419
Peck, W. G. Elementary Treatise in Determinants 278
Peters, E. D. Modern American Methods of Copper-Smelting 565
Philosophical Society of Washington, Bulletin for 1886 277
Powell, E. P. Our Heredity from God 413

Books noticed: PAGE
Powell, J. W. Sixth Report of United States Geological Survey..... 278
Proctor, R. A. Half-Hours with the Stars 854
Quackenbos, J. D. Appletons' Physical Geography..... 126
Ridgway, Roberts. Manual of North American Birds..... 705
Riley, C. V. Entomological Report, 1886—Experiments with Insecticides—Our Shade-Trees and their Insect Defoliators..... 565
Roemer, Jean. Origins of English People and Language..... 702
Roos, Dr. P. F. Van Hamel. Revue des Falsifications des Denrées Alimentaires..... 419
Saintsbury, George. History of Elizabethan Literature..... 708
Salomons, Sir David. Management of Accumulators..... 855
Sansone, Antonio. The Printing of Cotton Fabrics..... 127
School of Expression, Boston. Second Annual Report..... 564
Scudder, S. H. Present Knowledge of Fossil Insects..... 419
Seifert, O., and Müller, F. Manual of Clinical Diagnosis..... 568
Snow, M. S. The City Government of St. Louis..... 133
Society for Promotion of Agricultural Science, Seventh Meeting..... 421
Spencer, T. C. The Struggle for Religious and Political Liberty..... 132
Sprague, C. E. Hand-Book of Volapük..... 280
Stevenson, R. L. Memoir of Fleeming Jenkin..... 706
Sutton, J. B. Ligaments, their Nature and Morphology..... 135
Thomann, G. The Effects of Beer..... 277
Thoreau, H. D. Winter..... 567
Upham. Beeches and Deltas of Lake Agassiz..... 420
Van Dyke, J. C. The Principles of Art..... 274
Vermeule, C. C. Topographical Survey of New Jersey..... 280
Von Förster, Max. Compressed Gun-Cotton..... 133
Walcott. Cambrian Faunas of North America..... 419
Walker, Jerome. Health Lessons..... 134
Ward, L. F. Synopsis of the Flora of the Laramie Group..... 421
" Types of the Laramie Flora..... 420
West, M. A. Childhood: its Care and Culture..... 708
White, C. A. Laramie and Fresh-Water Eocene Fauna..... 420
White, J. C. Dermatitis Venenata..... 132
Whitman, C. O., and Allis, E. P. The Journal of Morphology..... 852
Williston, S. W. Synoposis of the North American Sylphidæ..... 133
Withington, C. F. Transmission of Disease by Rags..... 566
Wood, H. C. Nervous Diseases and their Diagnosis..... 132
Wurtz, A., and Greene, W. H. Elements of Modern Chemistry..... 563
Boomerang, The..... 283
Borrowing without Credit (Editorial)..... 702
Bowen, Eliza A..... 267
Bright's Disease, Origin of..... 573
Britain, The Making of..... 716
Brown University, The Scientific Department of 423
Building-Stone, Protection of..... 713

Californian Dry-Winter Flowers (Halsted)..... 770
Cameo-Cutting for Amateurs..... 715
Cameos..... 284

PAGE
Cancer, Recent Views respecting (Morris) 534
Candy, A Paper of (Kennedy) 782
Catastrophes, Are there? 141
Cattell, J. McK 488
Cattle, The Wild, of New Zealand 718
Centralization in School-Life 424
Character, The Cause of 821
Chemistry, The, of Underground Waters (Daubrée) 873
Chinese in America 136
Cincinnati, The Hills and Valleys of 282
City, A Rock-Sculptured 142
Clarke, Professor F. W 799
Climate of the Lake Region (Hubbard) 373
Clouds, Iridescent 712
Coffee, Antiseptic Properties of 861
College Athletics and Physical Development (Richards) 721
Conklin, W. A 122
Consciousness, The Antechamber of (Speir) 657
Copyright, International (Editorial) 409
Coral Reef, Glimpses of Life along a (Herrick) 315
Correspondence 122, 266, 554, 697, 841
Counterfeiting Gems 425
Country Boys, The Scientific Privileges of 571
Crater-Lake, The, Chala 858
Cross-Timbers, The, of Texas 427

Dangers, The, of Receiverships (Bartol) 236
Darwin's Education (Editorial) 698
Darwin's Working Life, Glimpses at (Larrabee) 619
Darwin, The Boyhood of (Darwin) 208
Daubrée, Professor G. A 610, 813
Davies, H. Brooke 96
Dawson, Sir William 787
Diatoms, The Nature of 142
Disinfection by Heat and by Steam 718
Disturbances, The Economic, since 1873 (Wells) 1, 170, 289, 455, 577
Dust, Electrical Deposition of 140

Earthquake, an, Effects of 717
Economical Plants, New 571
Economic Disturbances, The, since 1873 (Wells) 1, 170, 289, 455, 577
Economic Outlook, The (Wells) 577
Edible Birds' Nests, What they are made of 284
Edison's (Mr.) Pyromagnetic Dynamo 138
Editor's Table 123, 267, 409, 555, 698, 842
Eimer, Professor Theodor G. H 26
Electric Tractive Adhesion 573
Erysipelas, Vaccination and 715
Evolution, A Difficulty regarding 554
Evolution, An Alleged Argument against (Editorial) 267

PAGE
Evolution and Religious Thought (Le Conte)..... 311
Evolution, What American Zoölogists have done for (Morse)..... 100, 492
Evolution: What it is Not, and What it Is..... 636
Exceptions to the Rule of Laissez-Faire..... 138
Exhibition, The International Competitive, at Brussels..... 424
Explosives, Efficiency of..... 714

Fernald, Frederik A..... 87
Fernow, B. E..... 225
Fibers, Mineral..... 480
Fictional Astronomy (Beebe)..... 122
Fielde, Adèle M..... 796
Figs, The Time of (Huntoon)..... 842
Fig-Tree, "The Blighted," Professor Huxley and (Huntoon)..... 697
Fishes, The Family-Life of (Hennings)..... 777
Flamingoes at Home (Blake)..... 682
Flora, North American, Antiquity of..... 570
Flowers, Californian Dry-Winter (Halsted)..... 770
Food, Mineral Constituents of..... 860
Forestry-Problem, Our (Fernow)..... 225
Fruit-Diet, Some Advantages of..... 710
Fungi, Parasitic, Injuries caused by..... 428

Geography, Geikie on the Teaching of (Fernald)..... 87
Glacial Drift, How the, was deposited..... 860
Glaciation on the Pacific Coast..... 429
Glacier? What is a..... 857
Glass, Optical, New Kinds of..... 858
Glass-Snake, a, Dissection of (Conklin)..... 122
Gore, J. H..... 261
Granger Movement, The Outcome of the (Pierson)..... 368
Granger Movement, The Rise of the (Pierson)..... 199
Graphite, What is?..... 283
Gray, Professor, Death of (Editorial)..... 845
Greene, Thomas L..... 697
Ground-Water and Health..... 285
Guessing, Curiosities of..... 572

Hale, Horatio..... 340
Halsted, Professor Byron D..... 770
Handiwork Teaching in Swedish Schools..... 713
Health, Ground-Water and..... 285
Heating, Roundabout..... 574
Henderson, Professor C. H..... 529
Hennings, Karl..... 777
Herrick, Francis H..... 315
How it works (Editorial)..... 841
Hubbard, Bela..... 373
"Human Responsibility," The "Act of God" and (Editorial)..... 555
Huntoon, J. W., M. D..... 697, 842

PAGE
Huxley, Professor, and the "Blighted Fig-Tree" (Huntoon)..... 697
Huxley, Professor T. H..... 166, 352, 732
Hypnotism in Disease and Crime (Binet and Féré)..... 763

Ice-Supply, Our, and its Dangers (Prudden)..... 668
Idiosyncrasies of Plants..... 142
Indians, The, of British Columbia (Boas)..... 628
Indian Villages in New York..... 427
Individuality in our Schools (Marvin)..... 841
Inheritance, Curious Facts of..... 688
Insects resembling Minerals..... 862
Instruction, Oral and Text-Book..... 574
Interference, Governmental, with Production and Distribution (Wells)..... 289
International Copyright (Editorial)..... 409
Interstate Commerce Law, The (Greene)..... 697
Interstate, The, "Long and Short Haul" (Wood)..... 537
Inventions at Panama (Weld)..... 145

Jackson, J. Hughlings, M. D..... 327
Joking, The Psychology of (Jackson)..... 327

Kappler, August..... 396
Kellogg, Theodore H., M. D..... 387
Kennedy, William Sloane..... 782
Kitchen College, A (Davis)..... 96
Krakatoa Dust, How the, was carried..... 858

Laissez-Faire, Exceptions to the Rule of..... 138
Lakes, Siberian, The Drying up of..... 139
Language, Race and (Hale)..... 340
Larrabee, William H..... 619
Law, The Forms and Failures of (Snyder)..... 751
Le Conte, Joseph..... 17, 311
Lesson, A Great (Argyll)..... 241
Lime-Salts in the Food and the Teeth..... 716
Liquors, Strong, Origin of..... 140
Literary Notices..... 126, 271, 413, 558, 702, 848
Literary Piracy, English..... 424
Lockyer's (Mr.) Theory of the "Cosmos"..... 569
Long and Short Haul, The (Wood)..... 842
Loss, Preventable, in Agriculture..... 426
Luminous Organs, The, of an Insect..... 139
Lyman, Chester S., Sketch of..... 116

McAnally, D. R..... 71
Maple-Sugar, Notes about..... 572
Marvin, D. S..... 841
Metals, The, of Ancient Chaldea (Berthelot)..... 220
Metals, the Precious, Changes in the Relative Values of (Wells)..... 170
Milk, Sewage Farm, Qualities of..... 287

PAGE
Milk, The Adulteration of (Henderson) 529
Mills, T. Wesley 266
Mineralogy, The Present Status of (Clarke) 799
Minerals, Artificial, Production of 286
Mistakes in treating Organic Refuse 714
Monkeys, The, of Dutch Guiana (Kappler) 396
Moon, The, and the Weather (Oliver) 473
Morgan, Appleton 332
Morris, Robert T., M. D 534
Morse, Professor Edward S. 100, 492
Mortality, Relative, of Social Classes 428
Moth-Trap, A Floral 717
Mound-Builders, Opinions about 710

Nason, Henry Bradford, Sketch of 694
Nerve-Shock, Results of 712
Newberry, Dr. J. S. 31
Newell, N. E. 257
Neumann-Spallart, F. X. von 806
Notes 142, 287, 430, 575, 718, 863

Object-Teaching, Hints in 285
Oliver, John Westwood 473
Outlook, The Economic (Wells) 455
Oyster-Fattening 555
"Oyster-Fattening," The Chemistry of (Atwater) 76

Panama, Inventions at (Weld) 145
Panama, Progress at (Rogers) 447
Panama Canal, The 709
Peabody Museum, The 570
Persian Astrologers 141
Phenomena, Social, The Uniformity of (Neumann-Spallart) 806
Phonology, English (Kellogg) 387
Photographing Birds 430
Photography as an Aid to Astronomy 426
Pierson, C. W. 199, 368
Plant-Growth, Another Anomaly in (Schellenberg) 122
Plants, Food and Fiber, of the North American Indians (Newberry) 31
Plants, The Earliest (Dawson) 787
Plants with Insect-Guards 573
Play, Out-Door, for School-Girls 856
Popular Miscellany 136, 281, 423, 569, 709, 856
Prudden, T. Mitchell, M. D 668
Publisher, His own 573
Purse-Web Spider, The Nest of the 862

Race, An Outcast, in the Pyrenees 546
Race and Language (Hale) 340
Railroads and Trade-Centers (Morgan) 332

PAGE
Rattle, a Snake's, The Use of 429
Receiverships, The Dangers of (Bartol) 236
Refuse, Organic, Mistakes in treating 714
Religious Thought, Evolution and (Le Conte) 311
Reptiles, Useful 859
Richards, Professor Eugene L 721
Rich Men's Duties to Themselves 571
Rocks, Genesis of "Original" 714
Rogers, Lieutenant Charles C 447
Royse, M. K 554
Ruby-Mines, The, of Burmah 716

Savagery, The, of Boyhood (Mills) 266
Schellenberg, F. B 122
Science and Practical Life (Huxley) 166
Science and Revelation (Stokes) 47
Science and the Bishops (Huxley) 352
Science in Harness (Editorial) 123
Science, The Contradictions of (Editorial) 701
Scientific Habits of Thought (Editorial) 842
Seeley, Professor, on Classical Training (Editorial) 700
Sensations, Deceptive 428
Serviss, Garrett P 53, 511
Shaler, Professor N. S 484
Siberian Lakes, The Drying up of 139
Skull, a Crystal 861
Snyder, Philip 751
Soap, Various Kinds of 713
Soil-Making, Animal Agency in (Shaler) 484
Somnambulism 286
Specialization in Science (Eimer) 26
Speir, Francis, Jr 657
Stars, The, of Autumn (Serviss) 53
Stars, The, of Winter (Serviss) 511
Stillman, W. O., M. D 114
Stokes, Professor G. G 47
Struggle, The, for Existence (Huxley) 732
Superstitions, Chinese (Fielde) 796

Table-topped Hills, The, of the Amazon 137
Taxes, English 718
Teeth, Why do our, decay so fast? 861
Think, The Time it takes to (Cattell) 488
Thompson, D. G 213
Thought and Language (Thompson) 213
Thought, Scientific Habits of (Editorial) 842
Tolstoi's Astronomy (Bowen) 267
Trees for Plantation around Houses 427
Tropical Woods, Characteristics of 138
Truth and its Pursuit (Editorial) 270
Turkish Bath, a, How to take 574

PAGE
Uniformity, The, of Social Phenomena (Neumann-Spallart)..... 806

Vaccination and Erysipelas..... 715

Warfare of Science, the, New Chapters in (White)..... 433, 596
Waters, Underground, as Social Factors (Daubrée)..... 610
Waters, Underground, The Chemistry of (Daubrée)..... 813
Weather-Prognostics (Abercromby)..... 648
Weather, The Moon and the (Oliver)..... 473
Wedding-Ring, About the (McAnally)..... 71
Weed, W. B..... 554
Weld, Stuart F..... 145
Wells, David A..... 1, 170, 289, 455, 577
Wells, David Ames, Sketch of..... 832
What can he do?..... 425
White, Andrew Dickson..... 433, 596
Whitworth, Sir Joseph, Sketch of..... 550
Why have Wages risen?..... 554
Williams, Charles..... 555
Williams, C. M..... 123
Wines, British Colonial..... 286
Women, Emotion *versus* Health in (Bissell)..... 504
Wood, Henry..... 537, 841
Woodpecker, a, Thrifty Habits of..... 711
Words, The Color of (Newell)..... 257

END OF VOL. XXXII.